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EXAMINER	
RYMAN, DANIEL J	
ART UNIT	**PAPER NUMBER**
2665	13

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/577,814	ROBERTS ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,13-21,28,31, and 33-41* is/are rejected.

7)☒ Claim(s) *5-12,22-27,29,30 and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 19-21, 28, 31, 33, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (USPN 6,266,345) in view of Bleickardt et al (USPN 5,461,622).

4. Regarding claims 1, 19, and 31, Huang discloses a method of and nodes for transporting an input signal through a hyper-concatenated connection between a start node and an end node in a network (Fig. 4 and col. 2, line 33-col. 3, line 22), the input signal having a variable user-selected concatenation (col. 2, lines 49-52) where "concatenation" is, as broadly defined, "to link together in series" such that a variable rate stream is concatenated since the sub-streams multiplexed to form the variable rate stream are linked in series, the method comprising steps of and the nodes comprising means for: a) receiving the input signal at the start node and splitting the input signal into a plurality of derived signals independently of the concatenation of the input data signal (Fig. 4; col. 2, line 33-col. 3, line 22; col. 4, line 31-col. 5, line 40; and col. 6, lines 22-61); b) transmitting the derived signals as hyper-concatenated data streams (optical stream over which input stream is transmitted) within respective ones of a plurality of channels (Fig. 4;

col. 2, line 33-col. 3, line 22; col. 4, line 31-col. 5, line 40; and col. 6, lines 22-61); and c) recombining the derived signals at the end node to form an output signal equivalent to the input signal (Fig. 4; col. 2, line 33-col. 3, line 22; col. 4, line 31-col. 5, line 40; and col. 6, lines 22-61). Huang does not expressly disclose that the plurality of channels are independent channels or that at least one of the hyper-concatenated data streams is routed through a pointer processing state machine that is independent of a pointer processing state machine through which another one of the hyper-concatenated data streams is routed. Instead, Huang teaches that "the virtual channels are concatenated such that the phase relationships of each virtual channel is fixed and the transmitted data appears to be transmitted as a whole unit" (col. 3, lines 2-5). Belickardt teaches, in a system for inverse multiplexing a data stream, having the plurality of channels be independent channels and having at least one of the hyper-concatenated data streams be routed through a pointer processing state machine that is independent of a pointer processing state machine through which another one of the hyper-concatenated data streams is routed (col. 1, lines 25-36; col. 2, line 8-col. 3, line 48; and col. 7, line 49-col. 8, line 12) in order to allow the separate signals to be transmitted over different transmission facilities and to allow inverse multiplexers from different suppliers to be end-to-end compatible (col. 1, lines 11-40 and col. 3, lines 5-18). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the plurality of channels be independent channels and to have at least one of the hyper-concatenated data streams be routed through a pointer processing state machine that is independent of a pointer processing state machine through which another one of the hyper-concatenated data streams is routed in order to allow the separate signals to be transmitted over

different transmission facilities and to allow inverse multiplexers from different suppliers to be end-to-end compatible.

5. Regarding claim 2, referring to claim 1, Huang in view of Bleickardt discloses that the output signal is output from the end node at a signal phase that is arbitrarily related to a signal phase of the derived signals (Huang: col. 2, line 33-col. 3, line 22 and Bleickardt: col. 7, lines 19-48) where "arbitrarily" is a very broad term which covers any relationship between the signal phase of the concatenated output and the signal phase of a derived signal and where since Huang in view of Bleickardt does not specify a phase relationship, the relationship is arbitrary.

6. Regarding claim 3, referring to claim 1, Huang in view of Bleickardt discloses that the independent channels in the hyper-concatenated connection meet predetermined criteria, comprising: a) each of the channels is processed by adjacent pointer processors in the start node and the end node (Bleickardt: Figs. 2 and 5; col. 2, line 11-col. 3, line 4); and b) the channel order is identical at the start node and the end node (Bleickardt: Figs. 2-5). Huang in view of Bleickardt does not expressly disclose that c) a maximum latency between the derived signals received at the end node on channels of the hyper-concatenated connection is less than a predetermined time interval; however, Huang in view of Bleickardt does disclose that the receiver is capable of realignment of frames that are misaligned by up to 64 frames (Bleickardt: col. 3, lines 22-36 and col. 7, lines 19-35). Huang in view of Bleickardt also discloses that the receiver can be set to correct for a specific amount of through the length of the receiver's buffers (Bleickardt: col. 7, lines 19-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to determine the maximum latency between the derived signals in order to determine the size of the buffers in the receiver.

7. Regarding claim 4, referring to claim 3, Huang in view of Bleickardt discloses that the predetermined time interval is less than a time period required to receive a frame from a one of the derived signals at the end node (Bleickardt: col. 7, lines 29-35).

8. Regarding claim 20, referring to claim 19, Huang in view of Bleickard discloses that each hyper-concatenated channel has a signal bandwidth expressed as an integer M (where M>=1) of frames of the derived signal to be transmitted over each respective channel (Bleickard: col. 1, lines 41-55; col. 2, lines 44-54; col. 4, lines 6-21; and col. 7, line 67-col. 8, line 11).

9. Regarding claim 21, referring to claim 20, Huang in view of Bleickard discloses that M is selected from a group consisting of: 1, 2, or an integer multiple of 3 (Bleickard: col. 1, lines 41-55; col. 2, lines 44-54; col. 4, lines 6-21; and col. 7, line 67-col. 8, line 11).

10. Regarding claim 28, referring to claim 21, Huang in view of Bleickardt discloses that the signal processor is adapted to determine the split location in the input signal in real-time as the input signal is received by the network node (Huang: Fig. 4; col. 2, line 33-col. 3, line 22; col. 4, line 31-col. 5, line 40; and col. 6, lines 22-61 and Bleickardt: col. 4, lines 6-44).

11. Regarding claim 33, referring to claim 31, Huang in view of Bleickardt discloses that the signal processor comprises, in respect of each hyper-concatenated data stream: a) an alignment buffer adapted to buffer payload data of a respective hyper-concatenated data stream (Bleickardt: col. 7, lines 19-35); b) a pointer processor adapted to detect a frame received in a respective data stream and determine a location of payload data in the frame (Bleickardt: col. 2, line 11-col. 3, line 4 and col. 3, lines 22-28); c) a read controller responsive to the pointer processor and adapted to read the buffered payload data in an aligned condition across the channels of the

hyper-concatenated connection into the concatenated output signal (Bleickardt: col. 7, lines 28-48).

12. Regarding claim 38, referring to claim 33, Huang in view of Bleickardt discloses that the alignment buffers have a predetermined storage capacity based on an anticipated maximum difference between propagation times of the respective signals received on each hyper-concatenated data stream (Bleickardt: col. 7, lines 19-35).

13. Regarding claim 39, referring to claim 38, Huang in view of Bleickardt does not disclose that the predetermined storage capacity of the alignment buffer is adequate to store frame data received in a time interval equivalent to twice the anticipated maximum difference in propagation delay of the respective hyper-concatenated data streams since Huang in view of Bleickardt discloses that the predetermined storage capacity is sufficient to store a quantity of payload data received in approximately the anticipated maximum difference between propagation delays of the respective frames of each derived signal (Bleickard: col. 7, lines 29-35). However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Huang in view of Bleickardt discloses that the predetermined storage capacity is sufficient to store a quantity of payload data received in

approximately the anticipated maximum difference between propagation delays of the respective frames of each derived signal, it would have been obvious to one of ordinary skill in the art at the time of the invention to store any amount of data, including twice the amount of the anticipated maximum difference, absent a showing of criticality by Applicant.

14. Regarding claim 40, referring to claim 38, Huang in view of Bleickardt discloses that the anticipated maximum difference in propagation delay between the respective hyper-concatenated data steams is less than a time interval required to receive a frame at the end node on any one of the hyper concatenated data streams (Bleickardt: col. 7, lines 29-35).

15. Regarding claim 41, referring to claim 38, Huang in view of Bleickardt does not disclose that the predetermined storage capacity is adequate to store frame data received during a period of 250 uSec; however, Huang in view of Bleickardt discloses that an amount of data is stored in a predetermined storage capacity (Bleickard: col. 7, lines 29-35). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Huang in view of Bleickardt discloses storing an amount a data in a predetermined storage capacity, it would have been obvious to one of ordinary skill in the art at the time of the invention to store any amount of data, including 250 uSec of data, absent a showing of criticality by Applicant.

16. Claims 13, 34, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (USPN 6,266,345) in view of Bleickardt et al (USPN 5,461,622) as applied to claims 1 and 33 above, and further in view of Yoshifuji (USPN 5,537,405).

17. Regarding claims 13, 34, and 37, referring to claims 1 and 33, Huang in view of Bleickardt discloses a) examining an overhead of each frame of the derived signals to determine whether the overhead includes a split indicator (Huang: Fig. 4 and col. 6, lines 22-61, esp. col. 4, lines 30-51) and c) reading out payload data of the derived signals in alignment across all of the channels of the hyper-concatenated connection to provide the concatenated output signal (Huang: Fig. 4; col. 2, line 33-col. 3, line 22; col. 4, line 31-col. 5, line 40; and col. 6, lines 22-61 and Bleickardt: Figs. 3-5; col. 6, lines 6-25; and col. 7, lines 19-66). Huang in view of Bleickardt does not disclose that the step of recombining the derived signals at the end node to form a concatenated output signal further comprises steps of: b) if the overhead includes a split indicator, replacing a payload pointer in the overhead with a concatenation indicator. Yoshifuji teaches, in a system for demultiplexing a concatenated data stream, replacing concatenation indicator values of each demultiplexed data stream with preset fixed values in order to have each demultiplexed data stream be treated on an individual basis (col. 1, line 6-col. 2, line 55). Yoshifuji also teaches placing concatenation indicator values in the headers of each derived signal in order to multiplex the derived signals into a concatenated signal in which all of the derived signals are treated as a single data unit for more efficient transmission (col. col. 1, line 56-col. 2, line 27). It would have been obvious to one of ordinary skill in the art at the time of the invention to b) if the overhead includes a preset value, replace a payload pointer in the overhead with a concatenation indicator in order to multiplex the derived signals into a

concatenated signal in which all of the derived signals are treated as a single data unit for more efficient transmission.

18. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (USPN 6,266,345) in view of Bleickardt et al (USPN 5,461,622) in further view of Yoshifuji (USPN 5,537,405) as applied to claim 13 above, and further in view of Parruck et al (USPN 5,257,261).

19. Regarding claim 14, referring to claim 13, Huang in view of Bleickardt in further view of Yoshifuji discloses c) controlling a read operation for reading the payload data of a derived data stream from a reference alignment buffer such that a position of a derived read pointer permits corresponding payload data to be read simultaneously from each derived data stream (Bleickardt: Figs. 3-5; col. 6, lines 6-25; and col. 7, lines 19-66); and d) reading the payload data of each derived data stream from respective alignment buffers based on the reference read operation, so that payload data of each of the data streams is read from the respective alignment buffers in alignment with corresponding payload data of a derived data stream (Bleickardt: Figs. 3-5; col. 6, lines 6-25; and col. 7, lines 19-66). Huang in view of Bleickardt in further view of Yoshifuji does not disclose that the step of reading out the payload data of the derived signals received at the end node comprises steps of: a) designating a data steam in the hyper-concatenated connection as a reference data stream; b) designating all other data steams of the hyper-concatenated connection as slaves to the reference data stream; c) controlling a read operation for reading the payload data of the reference data stream from a reference alignment buffer such that a position of a reference read pointer permits corresponding payload data to be read simultaneously from each slave data stream; and d) reading the payload data of each slave

data stream from respective slave alignment buffers based on the reference read operation, so that payload data of each of the slave data streams is read from the respective slave alignment buffers in alignment with corresponding payload data of the reference data stream. Parruck teaches, in a system for concatenating a plurality of data streams, a) designating a data steam in the low rate connection as a reference data stream (master) (Fig. 1b and col. 3, lines 42-68); b) designating all other data steams of the data connection as slaves to the reference data stream (Fig. 1b and col. 3, lines 42-68); c) controlling a read operation for reading the payload data of the reference data stream from a reference alignment buffer such that a position of a reference read pointer permits corresponding payload data to be read simultaneously from each slave data stream (Fig. 1b; col. 3, lines 49-54; col. 8, lines 45-68; and col. 13, lines 23- 54); and d) reading the payload data of each slave data stream from respective slave alignment buffers based on the reference read operation, so that payload data of each of the slave data streams is read from the respective slave alignment buffers in alignment with corresponding payload data of the reference data stream (Fig. 1b; col. 3, lines 49-54; col. 8, lines 45-68; and col. 13, lines 23- 54) in order to provide a means for concatenating any number of signals (col. 3, lines 15-23). It would have been obvious to one of ordinary skill in the art at the time of the invention to a) designate a data steam in the hyper-concatenated connection as a reference data stream; b) designate all other data steams of the hyper-concatenated connection as slaves to the reference data stream; c) control a read operation for reading the payload data of the reference data stream from a reference alignment buffer such that a position of a reference read pointer permits corresponding payload data to be read simultaneously from each slave data stream; and d) read the payload data of each slave data stream from respective slave alignment buffers based on the reference read operation,

so that payload data of each of the slave data streams is read from the respective slave alignment buffers in alignment with corresponding payload data of the reference data stream in order to provide a means for concatenating any number of signals.

20. Regarding claim 15, referring to claim 14, Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck discloses that the alignment buffers have a predetermined storage capacity based on an anticipated maximum difference between propagation delays of the respective derived signals (Bleickard: col. 7, lines 19-35).

21. Regarding claim 16, referring to claim 15, Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck discloses that the anticipated maximum difference between propagation delays of the respective derived signals is less than a time interval required to receive one of the frames at the end node (Bleickard: col. 7, lines 29-35).

22. Regarding claim 17, referring to claim 15, Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck does not disclose that the predetermined storage capacity is sufficient to store a quantity of payload data received in twice the anticipated maximum difference between propagation delays of the respective frames of each derived signal since Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck discloses that the predetermined storage capacity is sufficient to store a quantity of payload data received in approximately the anticipated maximum difference between propagation delays of the respective frames of each derived signal (Bleickard: col. 7, lines 29-35). However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242

(CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck discloses that the predetermined storage capacity is sufficient to store a quantity of payload data received in approximately the anticipated maximum difference between propagation delays of the respective frames of each derived signal, it would have been obvious to one of ordinary skill in the art at the time of the invention to store any amount of data, including twice the amount of the anticipated maximum difference, absent a showing of criticality by Applicant.

23. Regarding claim 18, referring to claim 17, Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck does not disclose that the predetermined storage capacity is adequate to store a quantity of payload data received during a time interval of 250 uSec; however, Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck discloses that an amount of data is stored in a predetermined storage capacity (Bleickard: col. 7, lines 29-35). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d

272, 205 USPQ 215 (CCPA 1980). Since Huang in view of Bleickardt in further view of Yoshifuji in further view of Parruck discloses storing an amount a data in a predetermined storage capacity, it would have been obvious to one of ordinary skill in the art at the time of the invention to store any amount of data, including 250 uSec of data, absent a showing of criticality by Applicant.

24. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (USPN 6,266,345) in view of Bleickardt et al (USPN 5,461,622) as applied to claim 33 above, and further in view of Parruck et al (USPN 5,257,261).

25. Regarding claim 35, referring to claim 33, Huang in view of Bleickardt does not disclose a) designating one of the hyper-concatenated data streams as a reference data stream; and b) designating all others of the hyper-concatenated data streams as slave data streams. Parruck teaches, in a system for concatenating a plurality of data streams, a) designating one of the hyper-concatenated data streams as a reference data stream (master) (Fig. 1b and col. 3, lines 42-68); b) designating all others of the hyper-concatenated data streams as slave data streams (Fig. 1b and col. 3, lines 42-68) in order to provide a means for concatenating any number of signals (col. 3, lines 15-23). It would have been obvious to one of ordinary skill in the art at the time of the invention to a) designating one of the hyper-concatenated data streams as a reference data stream; and b) designating all others of the hyper-concatenated data streams as slaves data streams in order to provide a means for concatenating any number of signals.

26. Regarding claim 36, referring to claim 35, Huang in view of Bleickardt does not disclose that a reference read controller is adapted to control a reference read operation for reading payload data of the reference data stream from a respective reference alignment buffer so that

payload data from each of the slave data streams can be read by respective slave read operations in alignment with the reference data stream. Parruck teaches, in a system for concatenating a plurality of data streams, having a reference read controller adapted to control a reference read operation for reading payload data of the reference data stream from a respective reference alignment buffer so that payload data from each of the slave data streams can be read by respective slave read operations in alignment with the reference data stream (Fig. 1b; col. 3, lines 49-54; col. 8, lines 45-68; and col. 13, lines 23- 54) in order to provide a means for concatenating any number of signals (col. 3, lines 15-23). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a reference read controller adapted to control a reference read operation for reading payload data of the reference data stream from a respective reference alignment buffer so that payload data from each of the slave data streams can be read by respective slave read operations in alignment with the reference data stream in order to provide a means for concatenating any number of signals.

Allowable Subject Matter

27. Claims 5-12, 22-24, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose or fairly suggest splitting an input signal into a plurality of derived signals independently of the concatenation of the input data signal where the input signal is a user-selected mix of concatenated and unconcatenated SONET/SDH signals.

28. Claims 25-27 and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims. The prior art does not disclose or fairly suggest having means for identifying each frame within the concatenated input signal that satisfies a condition (p*M)+I, for integers p, in order to determine a split location for the concatenated input signal. The prior art teaches interleaving bytes of the concatenated signal in order to decrease latency.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600